Ref. AL

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Claims

"A method of manufacturing a glass capillary, the method comprising the steps of:

forming a round rod-shaped S_1O_2 glass soot preform on the tip of a starting base material by a VAD method;

sintering said glass soot preform in an atmosphere of gas including sulfur and halogen to make a host material;

boring said host material to make a round host material

melt spinning said round host material."

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"Moreover, it is preferred that gas including halogen is mainly Cl_2 gas, Br_2 gas and F_2 gas etc. that have advantageous effects, and gas including sulfur and halogen has $SOCl_2$ gas (thionyl chloride), S_2Cl_2 gas, SCl_4 gas, SO_2Cl_2 gas, $S_2O_2Cl_2$ gas, chlorosulfonic acid gas, $CSCl_2$ gas, $SOBr_2$ gas and SF_6 gas, etc.. These gases are mixed with inert gas such as N_2, Ar, He and so on to make mixed gas, and then transmitted into a host tube. In inert gas, He is especially preferred in view of thermal conductivity and gas diffusion. The concentration of gas including sulfur in mixed gas is 5~20 mole percent in case of SO_2 gas. A sufficient active group could not be formed on less than 5 mole percent, and bubbles may remain in a sintered glass because SO_2 may be overburned beyond 20 mol percent. Furthermore, the concentration of gas including halogen is 1~2 mol percent in case of Cl_2 gas."

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